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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,322	09/23/2003	Yuan-Hao Yeh	3313-1032P	9266
2292 7590 10/04/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER LE, BRIAN Q	
			ART UNIT	PAPER NUMBER
			2624	
			NOTIFICATION DATE	DELIVERY MODE
			10/04/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/667,322

Applicant(s)

YEH ET AL.

Examiner

Brian Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 and 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/23/03</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election with traverse of Group II, claims 13-16, in the reply filed on 08/22/2007, is acknowledged. The traversal is on the ground(s) that it should be no undue burden on the Examiner to consider all claims in the single application. This is not found persuasive because these inventions are independent or distinct for the reasons as indicated in the Office Action filed 06/12/2007 and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang et al. U.S. Pub. No. 2004/0222987.

Regarding claim 13, Chang teaches a method of acquiring 3D (compute 3-D coordinate) (FIG. 21, element 152) color (FIG. 4, element 40) information, wherein a common light source (a fixed light source) (page 2, column 2, [0044]) and a pattern light source (light pattern) (FIG. 4, element 42) are used to respectively (FIG. 4, element 44) acquire a projected image (FIG. 4,

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element 50) and a pattern image (image capture by projected light patterns on object) (FIG. 19) to obtain a 3D model of an object (page 2, column 2, [0044]), wherein the pattern light source provides a pattern constructed by more than 3 basic colors (page 5, column 2, [0076]), and generating the pattern comprising:

providing a primary encoding unit (intelligent temporal coding) (page 3, column 2, [0051]);

adding one of the basic colors behind the primary encoding unit to form a new encoding unit (creates series of colored light pattern) (page 4, column 2, [0061]);

confirming whether the new encoding unit follows a predetermined color sequence (determine validity map) (page 4, column 2, [0062]);

putting the new encoding unit in a corresponding cluster according to an evaluation result ("The symbols at every image pixel then are estimated by clustering the perceived color and bit error are corrected") (page 4, column 2, [0064]); and

repeating the above steps to correctly locate all the encoding units (page 4, column 2, [0065]).

For claim 14, Chang also teaches the method wherein at confirming whether the new encoding unit follows a predetermined color sequence, the predetermined color sequence includes a series of colors in specific order (page 5, column 2, [0076]).

Referring to claim 15, Chang further teaches the method wherein one encoding unit is spaced from other encoding units in the same cluster at a predetermined distance (mapping of clusters base on a determined distance) (page 6, column 1, [0087-0089]).

Regarding claim 16, Chang teaches the method wherein the pattern is constructed by colors (six light patterns are six colors since each light pattern is a colored light pattern) (page 4, column 1, lines 1-3 and [0055]).

CONCLUSION

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to 3-D image processing, projecting images and processing pattern images:

U.S. Pat. No. 6,341,016 to Malione, teaches a method for measuring 3-D shape of object.

U.S. Pub. No. 2004/0151365 to An Chang et al., teaches a method of multiframe correspondence estimation.

U.S. Pub. No. 2003/0026475 to Yahashi et al., teaches a method of 3-D measuring.

U.S. Patent. No. 7,239,312 to Urisaka et al., teaches a method of processing a 3-D image.

U.S. Patent. No. 7,164,789 to Chen et al., teaches a method 3-D active vision with glyph address carpet.

U.S. Pat. No. 7,146,036 to An Chang et al., teaches a method of multiframe correspondence estimation.

U.S. Pat. No. 7,092,563 to Shiratani, teaches a method of 3-D information acquisition.

U.S. Pat. No. 7,013,040 to Shiratani, teaches a method of 3-D information acquisition.

U.S. Pat. No. 6,965,690 to Matsumoto, teaches a 3-D modeling method.

U.S. Pat. No. 6,853,458 to Yahashi et al., teaches a method of 3-D measuring.

U.S. Pat. No. 6,775,403 to Ban et al., teaches a method of processing 3-D shape data.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q. Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian Le
September 26, 2007